

# Kenya Bonitto

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## Education

July 2021 - Present      University of California, San Francisco  
Tetrad PhD Student

Sept. 2017 - June 2021      University of California, Los Angeles  
Bachelor of Science in Molecular, Cell, and Developmental Biology  
Minor: Biomedical Research

## Research Experience

March 2020 - Present      *Undergraduate Researcher*  
*Dr. Hilary Collier*  
*Molecular, Cell, and Developmental Biology Department, UCLA*

- Performing CUT&Tag sequencing to profile the global pattern of H4K20me3 in quiescent human dermal fibroblasts.
- Conducting CRISPR editing assays using RNPs to knock out Suv4-20h2, the methyltransferase of H4K20me3, to characterize how loss of H4K20me3 affects cell cycle regulation.
- Performing western blot analysis to quantify the levels of different chromatin organizational proteins in proliferating and quiescent conditions.
- Assisting in mouse experiments such as animal handling, preparing for injections, preparing tumor samples for flow cytometry assays, and dissecting mouse skin to isolate and culture mouse dermal fibroblasts.

Summer 2020      *Undergraduate Researcher*  
*Dr. Panagiotis Ntziachristos*  
*Department of Biochemistry and Molecular Genetics, Northwestern University*

- Analyzed the overall expression and genetic status of serine/arginine-rich splicing factors (SRSF) across different cancer sub-types via the *Cancer Cell Line Encyclopedia*.
- Determined the essentiality score of SRSFs across different cancer sub-types from genetic deletion studies via the *Cancer Dependency Map* through *DepMap Portal*.
- Processed large data sets by extensively using Excel, Jupyter Notebook, and GraphPad.

Sept. 2018 - Feb. 2020      *Undergraduate Researcher*  
*Dr. Jesse Zamudio*  
*Molecular, Cell and Developmental Biology Department, UCLA*

- Designed and cloned targeting vectors for CRISPR Cas9 targeting strategy.
- Used CRISPR Cas9 to knockout the endonuclease Dicer and generate new cell lines in mouse embryonic stem cells and mouse lung adenocarcinoma cells.
- Screened colonies and genotyped mutants to verify Dicer knockout cell system.
- Performed intracellular staining and operated a flow cytometer to perform Fluorescence Activated Cell Sorting (FACS) on the Dicer knockout cells to isolate the role of Dicer-Independent small RNAs in cell cycle regulation.
- Conducted small RNA cloning and northern blot analysis to characterize the function of Dicer-independent small RNAs in mammalian systems.
- Mentored and trained two undergraduates to help in project experiments.

## Programs and Professional Development

2021- Present      *Initiative for Maximizing Student Development Fellows and Affiliates Program at UCSF (IMSD)*

- Two-year, NIH-funded fellowship for PhD students at UCSF
- Includes a summer research rotation, monthly professional development series, fellowship writing workshops, peer-mentoring program with post-docs at UCSF, and faculty mentorship

- Summer 2020     *Northwestern University's Virtual Summer Research Opportunity Program (SROP)*
- Conducted research virtually for 6 weeks in the laboratory of Dr. Panagiotis Ntziachristos.
  - Attended various seminars on graduate school, research ethics, and mentorship.
  - Gave an oral presentation on my project at the end of the program via Zoom.
- 2019-Present     *Maximizing Access to Research Careers (MARC) Program*
- Two-year, NIH-funded, undergraduate honors research program.
  - Includes part time research training during the school year (20 hr/wk), full time research over the course of two summers, and a quarterly course in developing writing, presenting, and networking skills.
- Summer 2019     *UCLA Center for Academic and Research Excellence, Science, Engineering, and Math Summer Program*
- Conducted full-time research for 10 weeks in the laboratory of Dr. Jesse Zamudio.
  - Attended seminars on graduate school, career development, and the NIH's "Responsible Conduct of Research" course.
  - Built scientific writing and presenting skills by working on a culminating thesis and presenting a poster at the end of the program.
- 2019-Present     *Biomedical Research Minor and Society*
- Application based minor for equipping undergraduates to pursue a career in the biomedical sciences.
  - Independent research is accompanied by coursework that helps to develop skills such as analyzing research literature, improving scientific writing, and presenting to an array of audiences.

## Presentations

- Title: *Investigating the Importance of Specific Upregulation of H4K20me3 During Reversible Cell Cycle Exit*
- Annual Biomedical Research Conference for Minority Students, Nov. 2020, **Poster Presentation.**
  - Program for Excellence in Education and Research in the Sciences, UCLA, Nov. 2020, **Oral Presentation.**
  - UCLA Undergraduate Research Week, May 2020, **Oral Presentation.**
- Title: *Characterizing the Role of the Dysregulation and Dependencies of Serine/Arginine-rich Splicing Factors in Cancer Progression*
- Gulf Coast Undergraduate Research Symposium, Rice University, Oct. 2020, **Oral Presentation.**
  - Northwestern Summer Research Opportunity Research Symposium, July 2020, **Oral Presentation.**
- Title: *Cell Systems to Characterize Noncanonical Small RNAs in the RNA Interference Pathway*
- Annual Biomedical Research Conference for Minority Students, Nov. 2019, **Poster Presentation.**
  - Program for Excellence in Education and Research in the Sciences, UCLA, Nov. 2020, **Poster Presentation.**
  - UCLA Center for Academic and Research Excellence SEM Summer Research Program, Aug. 2019, **Poster Presentation.**

## Awards and Honors

*NIGMS/NIH T32 Training Grant - Initiative for Maximizing Student Development Fellows and Affiliates Program at UCSF: July 2021-July 2023*

*NIH T34 Training Grant - Maximizing Access to Research Careers (MARC): June 2019 - June 2021*

*Dean's Honor List: Spring 2018, Winter 2020, Spring 2020, Fall 2020, Spring 2021*

*Annual Biomedical Research Conference Poster Presentation Awardee in Cell Biology: November 2019*

## Leadership and Teaching Experience

- 2019-Present     *Learning Assistant for Genetics and Cell and Molecular Biology*
- A multidisciplinary instructional program, where undergraduates who have an interest in teaching, and who have succeeded in a certain course, learn how to help the next group of students succeed in that course.
  - Assist in teaching a genetics upper division course and a cell and molecular biology lower division course.
  - Help to facilitate active learning in lecture and discussion sections, and have weekly meetings with the professor and TA's of the course to build teaching skills.

## Additional Skills

- Computer Skills: Excel, Adobe Illustrator, ImageJ, FlowJo Software, GraphPad, and Jupyter Notebook
- Certified in "Species Specific Training-Mouse" by the Division of Laboratory Animal Medicine, UCLA
- Fluent in Spanish